Appendix B

Chart Identifying Support for Each Claim in the Specification

6. A method of delivering a receiver specific program at at least one of a plurality of receiver stations, comprising the steps of:	Page 12, lines 3 - 9	It is the further purpose of this invention to provide means and methods whereby a simplex broadcast transmission can cause periodic combining of relevant user specific information and conventional broadcast programming simultaneously at a plurality of subscriber stations, thereby integrating the broadcast information with each user's own information.
	Page 470, lines 9 - 12	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program ...
	Page 470, lines 27 - 31	(Simultaneously and in the same fashion, apparatus of the station of said second subscriber [which station is a subscriber station of the intermediate station of Fig. 6] receives, ... said transmission.
generating a first control signal	Page 385, lines 9 - 12	... causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory ...
at a transmitter station	Page 385, line 35 - page 386, line 2	... causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 ...
receiving a second control signal at said transmitter station,	Page 385, lines 9 - 10	Receiving said message causes each of said computers, 73, to ...
said second control signal operative to communicate said first control signal	Page 385, lines 9 - 31	Receiving said message causes each of said computers, 73, ... to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message

		(#10)", ... Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; its retained meter-monitor information; any required padding bits; complete information of the program instruction set that is at its program-set-to transmit RAM memory; and information of a SPAM end of file signal.
transmitting said first control signal to	Page 386, lines 12 - 14	... thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
said at least one of said plurality of receiver stations	Page 484, lines 7 - 9	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station ...
in response to said second control signal,	Page 385, lines 9 - 13	Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93.
said first control signal effective at said at least one of a plurality of receiver stations to	Page 484, lines 12 - 17	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 ...
control a computer to	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first

		video overlay ... in the following fashion.
compute a receiver specific value	Page 486, lines 11 - 17	... said microcomputer, 205, ... computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 ...
by processing information stored in said computer,	Page 485, lines 18 – 22 *et seq.*	Automatically, in a fashion well known in the art, microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F ...
generate a receiver specific signal based on said receiver specific value,	Page 485, lines 15 - 16	... the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	Page 486, lines 20 - 24	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
and output programming based on said receiver specific signal.	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.

7. A method of delivering a receiver specific program at at least one of a plurality of receiver stations, comprising the steps of:	Page 12, lines 3 - 9	It is the further purpose of this invention to provide means and methods whereby a simplex broadcast transmission can cause periodic combining of relevant user specific information and conventional broadcast programming simultaneously at a plurality of subscriber stations, thereby integrating the broadcast information with each user's own information.
	Page 470, lines 9 - 12	At the station of Fig. 7 and 7F (which

3

		station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program ...
	Page 470, lines 27 - 31	(Simultaneously and in the same fashion, apparatus of the station of said second subscriber [which station is a subscriber station of the intermediate station of Fig. 6] receives, ... said transmission.
storing a control signal and selected data	Page 382, lines 1 - 5	... causes said computers, 73, each to load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to- transmit and data-set-to-transmit RAM memories of computer, 73, ...
	Page 379, lines 21 - 28	... and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1 ...
	Page 378, lines 23 - 25	(Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", ...
	Page 379, line 32 - page 380, line 5	executing the information of said intermediate generation set causes said computer, 73, to select data, from among the local-formula-and-item information of said station, including the aforementioned "Nabisco Zweiback Teething Toast" and the street address of every one of said supermarket chain's markets in the local vicinity of the station of Fig. 6, and to

		record said selected data on said memory disk in a data file named DATA_OF.ITS.
	Page 485, lines 14 - 16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates ...
at a transmitter station; and	Page 375, lines 4 – 6. See Figs. 6A and 6B.	The station of Fig. 6 receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
transmitting a transmission including said stored control signal and	Page 382, lines 15 - 16	to transmit the conventional television programming of unit Q.
	Page 385, lines 9 - 30	... causes each of said computers, 73, to generate a second outbound SPAM message ... (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", ... Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, information of ... the program instruction set that is at its program-set-to transmit RAM memory; ...
	Page 386, lines 7 - 14	Receiving the information of the particular program- instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93....
	Page 385, lines 3 - 9	Then said program originating studio embeds in the normal transmission

		location of said transmission and transmits a SPAM message ... Receiving said message causes ...
said stored selected data,	Page 383, lines 27 -28	generate a particular first outbound SPAM message that includes information of the data file, DATA_OF.ITS
	Page 384, line 30 - page 385, line 2	Receiving the information of the particular data- module-set message (#10) of the computer, 73, of its station causes each generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular data-module-set message (#10) of said station to said system, 93.
said control signal effective at said at least one of said plurality of receiver stations to	Page 484, lines 12 - 18	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
control a computer to	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
compute a receiver specific value	Page 486, lines 11 - 17	... said microcomputer, 205, ... computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 ...
by processing	Page 485, lines 18 –	Automatically, in a fashion well known in

information stored in said computer	22	the art, microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F ...
including said selected data	Page 485, lines 22 - 25	accesses its file D:DATA_OF.ITS and locates the aforementioned information of the particular street addresses of each of the markets of said supermarket chain that is in the locality of the intermediate station of Fig. 6.
generate a receiver specific signal based on said receiver specific value, and	Page 485, lines 15 - 16	... the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	Page 486, lines 20 - 24	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
output programming based on said receiver specific signal.	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, ...

21. The method of claim 6, said method further comprising the steps of:		
originating an instruct signal at said transmitter station; and	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Page 377, line 26 - page 378, line 7	Then the program originating studio at said network originating and control

		station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73, and consists of a "01" header, a particular execution segment, appropriate meter- monitor information, padding bits as required, information segment information of the aforementioned intermediate generation set of Q, and an end of file signal. (Hereinafter, said message is called the "generate-set- information message (#10)".) Except for its meter-monitor information, said generate-set-information message (#10) is identical to the aforementioned generate-set-information message (#9). Transmitting said generate-set-information message (#10) causes said dedicated decoders to detect and input said message to the computers, 73, of said stations. Receiving said message at said computers, 73, ...
generating some portion of at least one of a computer program and	Page 379, lines 5 - 31	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $Y = 1000.00 + 62.21875 + (2.117 * X)$ to select, compute, and replace other variable information until complete program instruction set information exists in higher language code at particular memory; to compile said higher language information; to link the information so complied with other compiled

		information; and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1--that applies to the particular discounts and specials in effect at the particular markets in the vicinity of said station and at the particular time of the network transmission of Q.
a data module	Page 379, line 31 - page 380, line 6	In precisely the fashion that applied in example #9, executing the information of said intermediate generation set causes said computer, 73, to select data, from among the local-formula-and-item information of said station, including the aforementioned "Nabisco Zweiback Teething Toast" and the street address of every one of said supermarket chain's markets in the local vicinity of the station of Fig. 6, and to record said selected data on said memory disk in a data file named DATA_OF.ITS. In so doing, said computer, 73, generates said data module set of Q.1.
in response to said instruct signal.	Page 378, lines 7 - 12	Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes each of said computers, 73, to execute the information so loaded as a machine language job; ...
	Page 379, lines 5 - 7	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, ...

	Page 379, lines 31 - 33	In precisely the fashion that applied in example #9, executing the information of said intermediate generation set causes said computer, 73, ...

22. The method of claim 6, wherein said receiver specific program includes a presentation of at least two instances of combined medium programming, said method further comprising the steps of:	Page 2, lines 8 - 18	Today great potential exists for combining the capacity of broadcast communications media to convey ideas with the capacity of computers to process and output user specific information. One such combination would provide a new radio-based or broadcast print medium with the capacity for conveying general information to large audiences--e.g., "Stock prices rose today in heavy trading,"--with information of specific relevance to each particular user in the audience--e.g., "but the value of your stock portfolio went down." (Hereinafter, the new media that result from such combinations are called "combined" media.)
	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".

transmitting a portion of each of said two instances of combined medium programming,	Page 374, lines 32 - 33	In example #10, a particular program originating studio transmits the commercial of program unit Q ...
	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
	Page 491, lines 10 – 16 (emphasis added)	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" *with its received conventional video information.* And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 506, lines 17 - 21 (emphasis added)	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "456-1414" *with its received conventional video information.* And automatically 456-1414 is displayed in the lower middle portion of the picture screen of monitor, 202M.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
	Page 507, lines 12 - 21	Said studio then transmits audio information of the announcer saying, "your Super Discount manager will see

		that all the ingredients that you need for your personal 'Exotic Meals of India' fish curry recipe are delivered to you in time for dinner tomorrow. And as a special inducement to enter "TV568*" on your Widget Signal Generator and Local Input now, your manager promises to include one jar of Patak's"
	Page 508, lines 19 - 27	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "Curry Paste. Do it now! Enter 'TV568*' on your Widget Signal Generator and Local Input or call the telephone number that you see on your television screen."
	Please note page 509, lines 31 – 32.	In due course, said studio ceases transmitting programming of said program unit of Q …

| 25. A method for controlling the transmission of a control signal from an intermediate transmitter station to a receiver station, comprising the steps of: | Page 374, lines 20 - 28 | In the present invention, a remote network origination and control station, such as the aforementioned program originating studio that originates the transmission of the "Wall Street Week" program, can control a plurality of intermediate transmission stations in generating and embedding combined medium control instructions--that is, program instruction sets, data module sets, and combining synch commands--that control generating and transmitting at pluralities of ultimate receiver stations. |
| receiving, at said intermediate transmitter station, information regarding | Page 378, lines 7 - 12 | Receiving said message at said computers, 73, causes each of said computers, 73, to load information of said intermediate generation set at particular RAM.
Then receiving the end of file signal that ends said message causes each of said |

		computers, 73, to execute the information so loaded
	Page 379, lines 26 - 28	In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1
a first control signal;	Page 378, lines 23 - 25	the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1"
receiving a second control signal	Page 381, lines 30 - 32	Receiving said message causes each of said computers, 73, to load said information segment instruction information at particular RAM.
operative to cause a first computer at said intermediate transmitter station to select data and to communicate said first control signal to a memory of said computer based on said data; and	Page 382, lines 1 - 5	Executing said instruction information causes said computers, 73, each to load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to- transmit and data-set-to-transmit RAM memories of computer, 73,
	Page 379, lines 21 - 28	to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1
transmitting, to said receiver station, said selected first control signal,	Page 386, lines 1 - 2	transmit the program instruction set of Q.1 in the program-instruction-set message
	Page 386, lines 13 - 14	transmitting the particular program-instruction-set message (#10) of said station to said system 93.

13

| said selected first control signal operative at said receiver station to control a second computer.to generate a receiver specific value | Page 484, lines 6 - 25 | Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station). As described above, the information of said segment includes formula-and-item-of-this-transmission information of the higher language line of program code:

$$Y = 1000.00 + 62.21875 + (2.117 * X)$$

compiled and linked to other compiled information. |
| | Page 486, lines 9 - 19 | Then automatically, on a machine language basis and in a fashion well known in the art, said microcomputer, 205, substitutes the value 4.3 for the variable X in the equation:

$$Y = 1000.00 + 62.21875 + (2.117 * X)$$

computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 (rounded in a fashion well known in the art); and stores 1071.32 information at particular 2nd working memory of said microcomputer, 205. |

14

by processing information stored in said second computer,	Page 469, lines 12 - 14	particular information is recorded in a file named DATA_OF.URS that is on a so-called "floppy disk" that is loaded at the A: disk drive at said microcomputer, 205.
	Page 485, lines 19 - 22	microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F
	Page 486, lines 2 - 5	by comparing distance information, microcomputer, determines which market is closest to said subscriber station, that the distance between said subscriber station and said market is 4.3 miles
generate a receiver specific signal based on said receiver specific value, and	Page 486, lines 20 - 27	microcomputer, 205, clears video RAM; causes the background color of video RAM to be a color such as black that is transparent when combined with transmitted video by the PC-MicroKey System; causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
communicate programming to an output device based on said receiver specific signal.	Page 491, lines 11 - 16	microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.

26. The method of claim 25, wherein said first control signal is generated at said intermediate	Page 377, lines 4 - 9	At said early time (which time is, in the preferred embodiment, a time of reduced operational requirement such as, for example, the middle of the night that precedes said network transmission of Q),

15

transmitter station before said second control signal is received.		the computers, 73, of said controlled intermediate transmission stations are caused to receive information of a particular transmission.
	Page 377, lines 26 - 29	Then the program originating studio at said network originating and control station, embeds in said normal transmission location and transmits a SPAM message that is addressed to ITS computers, 73
	Page 379, lines 26 - 28	In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1
	Page 381, lines 11 - 19	Shortly before commencing to transmit the television programming of unit Q, at a time when all controlled intermediate transmission stations are receiving and retransmitting said network transmission (which the station of Fig. 6 and said second station each receives at a receiver, 53, and transmits via a modulator, 83), said program originating studio embeds in the normal transmission location of said transmission and transmits a second SPAM message.
	Page 381, lines 30 - 32	Receiving said message causes each of said computers, 73, to load said information segment instruction information at particular RAM.

27. The method of claim 25, wherein said step of transmitting said first selected control signal is based on a third control signal.	Page 385, lines 3 - 13	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".) Receiving said message causes each

		of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93.

28. The method of claim 25, further comprising the step of storing said selected first control signal at a storage device included within said intermediate transmitter station.	Page 382, lines 2 - 5	load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to- transmit and data-set-to-transmit RAM memories of computer, 73

29. The method of claim 28, wherein said transmitting step is performed at a specific time according to a third control signal.	Page 385, lines 3 - 13	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".) Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93.

33. (Amended) The method of claim 6, further comprising the step of receiving operating instructions	Page 516, lines 18 - 24	In order to control fundamental aspects of the processing of any given data file, such as a DATA_OF.ITS or DATA_OF.URS file, under control of any given computer program, such as a PROGRAM.EXE

17

at said transmitter station, said operating instructions effective to control a processor at said transmitter station, wherein said first control signal and said second control signal are processed by said processor under control of said operating instructions.		program, a computer is usually preprogrammed with an operating system that controls such fundamental aspects as, for example, so-called "input/output" functions.
	Page 518, lines 5 - 29	One objective of the unified system of programming communication of the present invention is standardization of receiver station operating systems. With standardization, any given transmission station such as the program originating studio of example #10 can assemble and take control of a computer system of the computers of selected subscriber stations in the fashion described above in example #7 without any need to preprogram system software at any apparatus of said selected subscriber stations.
		Another objective of the present invention is flexibility and convenience in reprogramming operating systems in order to expand system functions.
		The present invention provides means and methods whereby one remote system master control station can preprogram all intermediate transmission stations and ultimate receiver station in a given geographical area (such as, for example, the continental United States of America) by transmitting a given sequence of SPAM messages that contain operating system instructions which sequence is received at and processed by all receiver stations and from which selected stations select selected messages that contain instructions of specific relevance. Each message is addressed to specific station SPAM control apparatus such as ITS computers, 73, in the case of intermediate

		transmission stations
34. The method of claim 7, further comprising the step of transmitting operating instructions to said computer, said operating instructions effective to control said computer, wherein said control signal is processed by said computer under control of said operating instructions.	Page 516, lines 18 - 24	In order to control fundamental aspects of the processing of any given data file, such as a DATA_OF.ITS or DATA_OF.URS file, under control of any given computer program, such as a PROGRAM.EXE program, a computer is usually preprogrammed with an operating system that controls such fundamental aspects as, for example, so-called "input/output" functions.
	Page 517, lines 22 - 23	apparatus that requires preprogramming at the station of Fig. 7, includes microcomputer, 205
	Page 518, lines 5 - 29	One objective of the unified system of programming communication of the present invention is standardization of receiver station operating systems. With standardization, any given transmission station such as the program originating studio of example #10 can assemble and take control of a computer system of the computers of selected subscriber stations in the fashion described above in example #7 without any need to preprogram system software at any apparatus of said selected subscriber stations.

Another objective of the present invention is flexibility and convenience in reprogramming operating systems in order to expand system functions.

The present invention provides means and methods whereby one remote system master control station can preprogram all intermediate transmission stations and ultimate receiver station in a given geographical area (such as, for example, the continental United States of America) by transmitting a given sequence of |

		SPAM messages that contain operating system instructions which sequence is received at and processed by all receiver stations and from which selected stations select selected messages that contain instructions of specific relevance. Each message is addressed to specific station SPAM control apparatus such as ITS computers, 73, in the case of intermediate transmission stations

35. A method of delivering a receiver specific	Page 11, lines 23 - 27	It is the further purpose of this invention to provide means and methods whereby a simplex point-to-multipoint transmission (such as a television or radio broadcast) can cause simultaneous generation of user specific information at a plurality of subscriber stations.
program	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
at a receiver station	Page 478, line 35 - page 479, line 1	Receiving said message at the station of Figs. 7 and 7F ...
having a computer and an output device, said method comprising the steps of:	Page 480, lines 10 – 17. See Fig. 7E.	Automatically, controller, 20, causes matrix switch, 258, to configure its switches so as to commence transferring audio information inputted from said microcomputer, 205, to monitor, 202M, and video information inputted from said microcomputer, 205, to monitor, 202M. In so doing, ... causes matrix switch, 258, to interconnect the apparatus of said station in the fashion of Fig. 7E.
(a) receiving a broadcast or cablecast information transmission	Page 29, lines 4 - 7	Fig. 2 shows one embodiment of a signal processor. Said processor, 26, is configured for simultaneous use with a cablecast input that conveys both television and radio programming and a broadcast television input.

comprising a plurality of units of programming and	Page 28, lines 6 - 22	In the present invention, the signal processor--26 in Fig. 2; ... 200 in Fig. 7; and elsewhere--is focal means for the controlling and monitoring subscriber station operations. ... It has capacity for identifying the subject matter of each specific unit of programming available on each of many transmission channels at each subscriber station as said unit becomes available for use and/or viewing ...
	Page 11, lines 5 - 10	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
	For example, page 478, lines 25 - 26	... commences transmitting the conventional television video and audio information of program unit Q.
	Page 482, lines 30 – 35 (emphasis added)	... transmit its specific data-module-set message (#10), as described above. ... one instance of *the DATA_OF.ITS information* in said message ...
and a control signal;	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	For example, page 482, lines 28 - 31	... causing each intermediate transmission station, including the station of Fig. 6 ... to transmit its specific data-module-set message (#10), as described above.
(b) communicating each of said plurality	Page 479, lines 18 - 30 See Fig. 7E as cited in	Automatically, controller, 20, determines, in a predetermined fashion, that the television information received at tuner,

of units of programming to at least one of: (1) said computer	the support for the preamble of this claim.	215, is displayed at monitor, 202M; that the audio emitted at monitor, 202M, is inputted to said monitor, 202M, via matrix switch, 258, from said tuner, 215; and that the video displayed at monitor, 202M, is also inputted to said monitor, 202M, via matrix switch, 258, from said tuner, 215. Automatically, controller, 20, causes matrix switch, 258, to configure its switches so as to transfer the video information that is inputted to monitor, 202M, also to divider, 4, and to configure its switches so as to transfer the audio information that is inputted to monitor, 202M, also to divider, 202D.
	Page 483, lines 2 - 13	At the station of Figs. 7 and 7F, receiving the data-module-set message (#10) transmitted by the intermediate transmission station of Fig. 6 ... causes decoder, 203, to load ... at microcomputer, 205, the information segment of said message (which includes complete information of the aforementioned data file, DATA_OF.ITS, of said station).
for processing; and	Page 492, lines 23 - 26	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing ...
	Page 483, lines 10 - 13	causes microcomputer, 205, to place said complete information at a so-called "D:" RAM disk at the RAM of said microcomputer, 205, in a file entitled, at the directory of said disk, "DATA_OF.ITS".
(2) said output device for delivery to a user;	Page 480, lines 10 - 17 See Fig. 7E.	Automatically, controller, 20, causes matrix switch, 258, to configure its switches so as to commence transferring audio information inputted from said microcomputer, 205, to monitor, 202M,

		and video information inputted from said microcomputer, 205, to monitor, 202M. In so doing, receiving said message causes matrix switch, 258, to interconnect the apparatus of said station in the fashion of Fig. 7E.
(c) detecting said control signal	Page 484, lines 12 - 15	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, ...
in said broadcast or cablecast information transmission	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
and passing said detected control signal to said computer;	Page 484, lines 12 - 18	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 ... causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
(d) controlling said computer based on said detected and passed control signal, said step of controlling	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates ...

comprising;		
(1) generating a receiver specific value by processing information that is stored in said computer;	Page 485, lines 17 - 18	... generates selected information of subsequent overlays in the following fashion.
	Page 488, lines 18 - 24	Then automatically, by dividing the information at said 3rd working memory (which is 915.93) by said cost-of-a-trimmed-pork-belly-unit information (which is 1987.25), microcomputer, 205, computes information of .4609 (rounded), which is the decimal equivalent of the percentage saving; determines that said information is greater than .4600 and less than .4700; ...
(2) selecting at least one of said plurality of units of programming based on said receiver specific computer generated value; and	Page 488, lines 22 - 26	... .4609 (rounded), which is the decimal equivalent of the percentage saving; determines that said information is greater than .4600 and less than .4700; and selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; ...
(3) outputting said selected at least one of said plurality of units of programming; and	Page 488, lines 25 - 27	... information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".

(e) delivering a presentation of two or more units of programming,	Page 490, lines 21 - 23	Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.
	Page 491, lines 14 - 16	... the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 494, lines 28 - 30	Meanwhile, as said studio continues to transmit television picture information of the person pointing to the upper left hand corner of the television screen, ...
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 493, lines 16 -	Then after an interval that is long

25

	21	enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
said two or more units of programming including said selected at least one of said plurality of units of programming.	Please see page 492, lines 23 – 30.	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".

36. The method of claim 35 wherein said selected at least one of said plurality of units of programming is delivered as printed text.	Page 496, lines 12 – 13 *et seq.* See the coupons at the bottom of page 496.	At printer, 221, the printed so-called "hard copy" of said offer and coupon information emerges as:
	Page 484, lines 12 - 18	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
	Page 496, lines 6 - 11	Automatically, microcomputer, 205, transmits additional print information of said program instruction set of Q.1 including information of "15 cents off" and of "Nabisco Zweiback Teething Toast" (incorporated into said generally applicable information at the station of

26

		Fig. 6).
	Page 495, line 18 - page 496, line 11	Under control of said program instruction set instructions received by said microcomputer, 205, microcomputer, 205, commences to generate print output information and to transmit said information to printer, 221. Automatically, microcomputer, 205, transmits to printer, 221, particular print information (that is transmitted to intermediate stations in the generate-set-information message (#10) as generally applicable information of the intermediate generation set of Q and is complied and/or linked to become part of said program instruction sets of Q.1 and Q.2) of "Super Discount Supermarkets offers to deliver at cost one unit of untrimmed pork belly product, suitable for a large outdoor barbecue party, to:". Automatically, microcomputer, 205, accesses the file A:DATA_OF.URS, selects information of the aforementioned particular address of the subscriber station of Figs. 7 and 7F, and causes said information to be printed at printer, 221. Automatically, microcomputer, 205, transmits additional print information of said program instruction set of Q.1 to printer, 221, causing printer, 221, to print: "in exchange for this coupon and the sum of" and "$". Automatically, microcomputer, 205, selects information of the aforementioned 1071.32 at said 2nd working memory and transmits said information to printer, 221, causing printer, 221, to print: "1,071.32". Automatically, microcomputer, 205, transmits additional print information of said program instruction set of Q.1 including information of "15 cents off" and of "Nabisco Zweiback Teething Toast" (incorporated into said generally applicable information at the station of Fig. 6).

37. The method of claim 35 wherein said selected at least one of said plurality of units of programming includes audio, and	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
	Page 483, lines 2 - 13	At the station of Figs. 7 and 7F, receiving the data-module-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which includes complete information of the aforementioned data file, DATA_OF.ITS, of said station). Executing said information causes microcomputer, 205, to place said complete information at a so-called "D:" RAM disk at the RAM of said microcomputer, 205, in a file entitled, at the directory of said disk, "DATA_OF.ITS".
said step of outputting comprises placing said audio into said audio RAM.	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.

38. The method of claim 35, wherein said selected at least one of said plurality of units of programming	Page 483, lines 2 - 13	At the station of Figs. 7 and 7F, receiving the data-module-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which includes complete information of the aforementioned data file, DATA_OF.ITS, of said station). Executing said information causes microcomputer, 205, to place said complete information at a so-called "D:" RAM disk at the RAM of said microcomputer, 205, in a file entitled, at the directory of said disk, "DATA_OF.ITS".
includes information to be displayed in video, and said step of outputting comprises placing said information to be displayed in video into a video RAM.	Page 501, lines 16 - 25	Automatically, under control of said instructions, microcomputer, 205, ... selects from said D:DATA_OF.ITS file information of the aforementioned southwest delivery route telephone number, "456-1414", and causes binary image information of said number to be placed at bit locations that produce video image information in the lower middle portion of a video screen.

55. A method of signal processing	Page 40, lines 17 - 23	The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations. (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.)
at a receiver station	Page 478, line 35 -	Receiving said message at the station

	page 479, line 1	of Figs. 7 and 7F causes ...
having a computer and an output device	Page 480, lines 10 – 17. See Fig. 7E.	Automatically, controller, 20, causes matrix switch, 258, to configure its switches so as to commence transferring audio information inputted from said microcomputer, 205, to monitor, 202M, and video information inputted from said microcomputer, 205, to monitor, 202M. In so doing, ... causes matrix switch, 258, to interconnect the apparatus of said station in the fashion of Fig. 7E.
to deliver at the output device an output of combined medium programming	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."

including a receiver specific datum within	Page 486, lines 20 - 27	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
a broadcast or cablecast	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
program, said method comprising the steps of:	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
(a) receiving an information transmission	Page 479, lines 19 - 20	... the television information received at tuner, 215, ...
comprising a broadcast or cablecast	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of

		operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
program	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
and a control signal;	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Page 481, lines 7 - 9	... the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q.
(b) selecting said received broadcast or cablecast program from the information transmission and transferring it to the output device for delivery to the user;	Page 479, lines 21 - 25	... the audio emitted at monitor, 202M, is inputted to said monitor, 202M, via matrix switch, 258, from said tuner, 215; and that the video displayed at monitor, 202M, is also inputted to said monitor, 202M, via matrix switch, 258, from said tuner, 215.
(c) detecting said control signal in the information transmission and passing said detected control signal to said	Page 484, lines 12 - 17	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and

computer; and		execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 ...
(d) controlling said computer based on said control signal, said step of controlling comprising: (1) generating	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
a receiver specific datum	Page 486, lines 11 - 17	... said microcomputer, 205, ... computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 ...
	Page 488, lines 21 - 23	... microcomputer, 205, computes information of .4609 (rounded), which is the decimal equivalent of the percentage saving; ...
by processing first information that is stored in said computer;	Page 485, lines 19 - 22	... microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F ...
	Page 488, lines 18 - 21	Then automatically, by dividing the information at said 3rd working memory (which is 915.93) by said cost-of-a-trimmed-pork-belly-unit information (which is 1987.25), microcomputer, 205, computes ...
(2) placing said receiver specific datum at a specific memory location of the computer;	Page 486, lines 20 - 24	... microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said

		information at audio RAM.
(3) communicating said receiver specific datum from said specific memory location to said output device; and	Page 491, lines 10 - 14	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed ...
	For example, page 26, lines 4 - 8	... microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	Page 492, lines 23 - 26	station. Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, ...
subsequently (4) clearing said receiver specific datum from said specific memory location;	Page 501, line 17	... microcomputer, 205, clears video RAM; ...
	Page 493, lines 33 - 34	... microcomputer, 205, clears its audio RAM ...
whereby combined medium programming of	Page 491, lines 10 - 16	MicroKey system of microcomputer, 205. Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 491, lines 30 -	Said studio then transmits audio

	35	information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
said received broadcast or cablecast program	Page 490, lines 21 - 23	Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
including said receiver specific datum is delivered in	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information.

		And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 480, lines 10 – 17. See Fig. 7E.	Automatically, controller, 20, causes matrix switch, 258, to configure its switches so as to commence transferring audio information ... to monitor, 202M, ... In so doing, ... causes matrix switch, 258, to interconnect the apparatus of said station in the fashion of Fig. 7E.
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
a period of time between said step of placing said receiver specific datum at said memory location	Page 486, lines 20 - 24	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
and said step of clearing said receiver specific datum from said specific memory location.	Page 501, line 17	... microcomputer, 205, clears video RAM; ...
	Page 493, lines 33 - 34	... microcomputer, 205, clears its audio RAM ...

36

56. The method of claim 55, wherein the step of generating	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
a receiver specific datum	Page 486, lines 11 - 17	... said microcomputer, 205, substitutes the value 4.3 for the variable X in the equation: $Y = 1000.00 + 62.21875 + (2.117 * X)$ computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 ...
	Page 488, lines 21 - 23	... microcomputer, 205, computes information of .4609 (rounded), which is the decimal equivalent of the percentage saving; ...
by processing information that is stored in the computer	Page 485, lines 19 - 22	... microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F the accesses its file D:DATA_OF.ITS ...
	Page 488, lines 18 - 21	Then automatically, by dividing the information at said 3rd working memory (which is 915.93) by said cost-of-a-trimmed-pork-belly-unit information (which is 1987.25), microcomputer, 205, computes ...
is achieved by . executing a computer program which is loaded at said computer in response to said control signal.	Page 484, lines 12 - 18	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message

		(which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).

60. The method of claim 55, wherein processor instructions executed by said computer to perform said step of controlling are	Page 484, lines 15 - 18	... causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
detected in the broadcast or cablecast information transmission.	Page 484, lines 2 - 18	... causing each intermediate transmission station, including the station of Fig. 6 and said second intermediate transmission station, to transmit its specific program-instruction-set message (#10), as described above. Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).

78. A receiver station apparatus	Page 478, line 35 - page 479, line 2	Receiving said message at the station of Figs. 7 and 7F causes ...
for signal processing	Page 40, lines 17 - 23	The signals of the present invention are the modalities whereby stations that

		originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations. (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.)
to deliver combined medium programming including	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
a receiver specific datum within	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F

		generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 486, lines 20 - 27	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
a broadcast or cablecast	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
program, comprising:	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
an output device,	Page 480, line 14	... monitor, 202M.
said output device for delivering	Page 480, lines 14 – 17. See Fig. 7E.	... monitor, 202M. In so doing, receiving said message causes matrix switch, 258, to interconnect the apparatus of said station

·		in the fashion of Fig. 7E.
	Page 470, lines 9 - 17	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is retransmitted by the intermediate station of Fig. 6; to interconnect in such a way that the audio information received at a tuner, 215, and the video information received at said tuner, 215, are inputted separately, via matrix switch, 258, ...
said program;	Page 478, lines 23 - 26	Then said studio ceases transmitting "Exotic Meals of India" programming for a so-called "commercial break" and commences transmitting the conventional television video and audio information of program unit Q.
	Page 492, lines 23 - 30	... transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
a decoder for detecting control signals in an information transmission	Page 484, lines 12 - 15. See, for example, Fig. 7E cited in the output device element.	At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203
a computer operatively connected to said output device	Page 480, lines 11 - 14	... causes matrix switch, 258, to configure its switches so as to commence transferring audio information inputted from said microcomputer, 205, to monitor, 202M, and video information inputted from said microcomputer, 205, to monitor, 202M.

and said decoder,	Page 484, lines 15 - 16	... causes decoder, 203, to ... execute at microcomputer, 205, ...
said computer having a specific memory location, and	Page 491, lines 10 - 14	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed ...
	For example, page 26, lines 4 - 8	... microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	Page 492, lines 23 - 26	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, ...
for performing the following steps based upon said control signals: (1) generating	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
a receiver specific datum	Page 486, lines 11 - 17	... said microcomputer, 205, ... computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 ...
	Page 488, lines 21 - 23	... microcomputer, 205, computes information of .4609 (rounded), which is the decimal equivalent of the percentage saving; ...
by processing information that is stored in said computer;	Page 485, lines 19 - 22	... microcomputer, 205, accesses its file A:DATA_OF.URS and locates the aforementioned information of the particular address of the subscriber station of Figs. 7 and 7F ...

	Page 488, lines 18 - 21	Then automatically, by dividing the information at said 3rd working memory (which is 915.93) by said cost-of-a-trimmed-pork-belly-unit information (which is 1987.25), microcomputer, 205, computes ...
(2) placing said receiver specific datum in said specific memory location;	Page 486, lines 20 - 24	... microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
(3) communicating said receiver specific datum from said specific memory location to said output device; and	Page 491, lines 10 - 14	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed ...
	For example, page 26, lines 4 - 8	... microcomputer, 205, at the PC-MicroKey 1300 to overlay the graphic information in its graphics card onto the received composite video information and transmit the combined information to TV monitor, 202M.
	Page 492, lines 23 - 26	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, ...
subsequently (4) clearing said receiver specific datum from said specific memory	Page 501, line 17	... microcomputer, 205, clears video RAM; ...

location,		
	Page 493, lines 33 - 34	... microcomputer, 205, clears its audio RAM ...
thereby delivering combined medium programming including	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
said receiver specific datum during	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 480, lines 10 – 17. See Fig. 7E.	Automatically, controller, 20, causes matrix switch, 258, to configure its switches so as to commence transferring audio information inputted from said

		microcomputer, 205, to monitor, 202M, and video information inputted from said microcomputer, 205, to monitor, 202M. In so doing, receiving said message causes matrix switch, 258, to interconnect the apparatus of said station in the fashion of Fig. 7E.
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
said broadcast or cablecast program	Page 490, lines 21 - 23	Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
in the period of time between placing said datum at said memory location	Page 486, lines 20 - 24	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the

		information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
and clearing said datum from said memory location.	Page 501, line 17	... microcomputer, 205, clears video RAM; ...
	Page 493, lines 33 - 34	... microcomputer, 205, clears its audio RAM ...

79. A method of communicating	Page 11, lines 5 - 10	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
mass medium	Page 1, lines 27 - 28	But television, radio, and broadcast print are only mass media.
	Page 478, lines 25 - 26	... the conventional television video and audio information of program unit Q.
program material from a transmitter station to	Page 367, lines 8 - 11	... which causes the transmission of unit Q to field distribution system, 93. ... the station of Fig. 6 ... program unit Q is combined medium programming, ...
	Page 372, lines 20 - 23	Subsequently, as recorder, 76, plays and transmits the programming of Q, via modulator, 83, to field distribution system, 93, recorder, 76, transmits eight SPAM messages that are embedded in the prerecorded programming of Q.
a plurality of receiver stations each of which includes a broadcast or cablecast program	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium

receiver,		programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
	Page 470, lines 9 - 12	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program ...
	For example, page 390, lines 30 - 31	Fig. 7 exemplifies one embodiment of an ultimate receiver station; ...
	Page 470, lines 27 – 31 (emphasis added)	(Simultaneously and *in the same fashion, apparatus* of the station of said second subscriber [which station is a subscriber station of the intermediate station of Fig. 6] receives, interconnects, meters and monitors, and displays at a monitor, 202M, the information of said transmission.
an output device,	Page 490, line 35 - page 491, line 6	Receiving said message causes each subscriber station that has completed the generation of first overlay image information at video RAM to combine its specific image information with the conventional video information transmitted by said studio and cause its specific monitor, 202M, to display the combined specific image information and transmitted video information.
a control signal	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber

		stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
detector,	Page 491, lines 6 - 7	At the station of Fig. 7 and 7F, decoder, 203, detects the information of said message, ...
	Page 491, lines 17 – 18 (emphasis added)	(Simultaneously and *in the same fashion, apparatus* at the station of said second subscriber causes ...
a computer,	Page 486, lines 20 - 24	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
	Page 486, line 28 - page 487, line 8	... the microcomputer, 205, at the station of said second subscriber ... causes binary image information of "$1,080.64" to be placed at ... video RAM.
and with each said receiver station adapted to detect the presence of at least one control signal,	Page 480, line 28 - page 481, line 12	... said studio transmits said synch-SPAM-reception message (#10), ... Receiving said message at the station of Figs. 7 and 7F causes decoder, 203, to detect the end of file signal of said message and ... to commence identifying and processing the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q.
	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
	Page 482, lines 9 – 14 (emphasis added)	(Receiving said synch-SPAM-reception message (#10) and said control-invoking message (#10) at the stations of

48

		said second subscriber ... causes *apparatus at said stations, in the same fashion,* to come under control of the computer system of said program originating studio.)
to generate a receiver specific datum	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 486, lines 20 - 24	... microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
	Page 486, line 27 - page 487, line 8	(Simultaneously, under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, at the station of said second subscriber ... causes binary image information of "$1,080.64" to be placed at ... video RAM.
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
	Page 488, line 27 - page 489, line 13	(In similar fashion, the microcomputer, 205, at the station of said second subscriber ... selects the aforementioned audio information of an announcer's voice saying "forty-five" from its file, D:DATA_OF.ITS; and places said information at said audio RAM.
in response to a detected specific control signal,	Page 484, lines 7 - 18	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular

49

		RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
and to deliver at said output device combined medium programming including	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 491, lines 17 - 23	(Simultaneously and in the same fashion, apparatus at the station of said second subscriber causes the specific video RAM image information of said station, which is "$1,080.64", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station and said subscriber can see the image said person pointing at $1,080.64.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 492, line 23 - page 493, line 5	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said

		audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six". (Simultaneously, the microcomputer, 205, at the station of said second subscriber transmits to the monitor, 202M, of said station, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing emission of sound of said audio information, and said second subscriber can hear said announcer's voice saying: "forty-five".
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
said receiver specific datum within	Page 491, lines 13 - 14	... automatically $1,071.32 is displayed ...
	Page 491, lines 21 - 23	... and said subscriber can see the image said person pointing at $1,080.64.
	Page 492, lines 27 - 30	... and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 493, lines 2 - 5	... and said second subscriber can hear said announcer's voice saying: "forty-five".
a broadcast or cablecast	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously.

		Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
program, said method comprising the steps of:	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
receiving at	Page 343, lines 26 - 32	Automatically, at the station of Fig. 6, the computer, 73, instructs ... receiver, 53, ... to receive the transmission of the frequency of the transponder 23 of said satellite.
a transmitter station	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a program	Page 344, lines 23 - 30 (emphasis added)	... said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, each of thirty seconds duration. In succession, said station transmits units A, B, C, ... P, Q, R, ...
	Please note page 347, lines 4 – 5.	... causing said recorder, 76, to record the programming of program unit Q ...

to be transmitted;	Page 342, lines 26 - 34	For example, in the case of the computer, 73, of the station of Fig. 6, said remote distribution station informs said computer, 73, to select and record program units Q, D, Y, and W; to transmit program unit Q at 2:30:30 PM eastern standard time, on January 29, 1988 on the cable channel transmitting the Cable News Network; ...
storing at said transmitter station	Page 365, lines 7 - 21	... generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, ... (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".)
a control signal which at said plurality of receiver stations operates to generate	Page 485, lines 10 - 16	Executing the specific program instruction set instructions received at each subscriber station causes the microcomputer, 205, of said station to generate its own specific information of a series of outputs. Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	Page 486, lines 27 - 30	(Simultaneously, under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, at the station of said second subscriber computes ...
	Page 514, lines 25 - 27	Furthermore, said program instruction set of Q of example #9 is identical to said program instruction set of Q.1 of example #10.
a receiver specific value and	Page 488, lines 16 - 24	Then microcomputer, 205, selects audio information that represents the percentage saving that said subscriber can save by buying an untrimmed pork belly unit in

		comparison to a trimmed pork belly unit at said market. Automatically, microcomputer, 205, clears its audio RAM. Then automatically, by dividing the information at said 3rd working memory (which is 915.93) by said cost-of-a-trimmed-pork-belly-unit information (which is 1987.25), microcomputer, 205, computes information of .4609 (rounded)
select audio for output based on said receiver specific value; and	Page 488, lines 24 - 27	selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
transmitting at a specific time an information transmission comprising said program and said control signal.	Page 371, lines 4 - 12	In due course, decoder, 77, detects the second SPAM message in the aforementioned series of SPAM messages that are addressed to ITS computers, 73, and transfers said message to computer, 73. Said second message contains execution and meter- monitor segments (and is called, hereinafter, the "transmit-and-execute-program-instruction-set message (#9).") Receiving said transmit-and-execute-program- instruction-set message (#9) causes ...
	Page 367, lines 8 - 9	... which causes the transmission of unit Q to field distribution system, 93.
	Page 372, lines 4 - 6	... thereby transmitting said program-instruction-set message (#9) to said system, 93.

89. The method of claim 79, wherein a controller	Page 326, lines 19 - 20	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
at said transmitter station	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted

		programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
controls the passing of a	Page 332, lines 29 - 31	Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D.
specific received	Page 330, lines 10 - 14 See "TV SIGNAL DECODER (FIG. 2A)" at "77" in Fig. 6A.	Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73.
	Page 34, line 29 - page 35, line 10. See Fig. 2A.	In Fig. 2A, ... The first path, designated A, detects signal information embedded in the video information portion of said television channel signal. Path A inputs to a standard line receiver, 33, well known in the art. Said line receiver, 33, receives the information of one or more of the lines normally used to define a television picture.
signal, said method further comprising the steps of	Page 40, lines 17 - 25	The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations. (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.)

		SPAM signals control and coordinate a wide variety of subscriber stations.
detecting embedded information in said specific received signal	Page 330, lines 10 - 19	Whenever programming is played on recorder, 76 or 78, decoder, 77 or 79 respectively, detects SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, and transmits said SPAM information to computer, 73. Said SPAM information can include not only "program unit identification code" information but also information regarding of the distance from the point on the tape at which a given SPAM message is embedded to the point on the tape where the program unit begins and ends (or to any other selected point).
and controlling the passing of said specific received signal	Page 332, lines 29 - 31	Automatically, computer, 73, then causes recorder, 76, to play and recorder, 78, to record for the duration of program unit D.
	Page 330, lines 11 - 13	... SPAM information embedded in the prerecorded programming played at the play heads of recorder, 76 or 78, ...
on the basis of said detected embedded information.	Page 332, lines 24 - 25	... causes computer, 73, to cause recorder, 76, to move forward or rewind to the start of program unit D; ...
	Page 330, lines 14 - 35	Said SPAM information can include not only "program unit identification code" information but also information regarding of the distance from the point on the tape at which a given SPAM message is embedded to the point on the tape where the program unit begins and ends (or to any other selected point). To position the start point (or another selected point) of a given program unit at the play heads of a given recorder, 76, computer, 73, instructs switch, 75, to configure its switches so as to transfer the transmission input from said recorder, 76, to no output.

		Then by instructing recorder, 76, to play and decoder, 77, to detect SPAM information in a particular location or locations, computer, 73, causes decoder, 77, to detect and transfer to computer, 73, said program unit and distance information. Receiving said information causes computer, 73, to cause recorder, 76, to stop playing; to analyze said distance information in a predetermined fashion; and to compute the precise time required to rewind to reach the start of the program unit or to move fast forward to reach the end. Then automatically, computer, 73, causes said recorder, 76, first, to start rewinding or moving fast forward then to stop after the precise time elapses.
	Please note page 355, lines 15 - 17	Program units Q and D are delivered, organized to play, and played according to schedule in the automatic fashions described above but with certain variations.
	Please note page 349, lines 5 - 22	At the station of Fig. 6, receiving said select-Z- message (#8) causes computer, 73, to determine that program units Q, Y, W, and D have been received and that no further units will be received. Determining that no further units will be received causes computer, 73, to cause matrix switch, 75, to configure its switches so as to transfer transmissions inputted from receiver, 53, to no output; to alter its operating records to show that the receiver apparatus receiving the transmission of said remote distribution station is no longer in use and is available; and to organize the locations of the recorded program units, D, Q, W, and Y, to play according to the schedule inputted by said distribution station in the fashion described above (in the paragraph of the section, "AUTOMATING INTERMEDIATE TRANSMISSION

		STATIONS," that begins, "Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming ... to play according to a given schedule").
.	Please note page 331, lines 17 - 21	Computer, 73, has capacity for automatically organizing the locations of units of prerecorded programming on recording media such as magnetic video tapes loaded on a plurality of recorder/players to play according to a given schedule.

103.The method of claim 79, wherein a plurality of signals	Page 40, lines 17 - 25	The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations. (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present invention.) SPAM signals control and coordinate a wide variety of subscriber stations.
is received from one	Page 343, lines 26 - 32	Automatically, at the station of Fig. 6, the computer, 73, instructs a selected earth station, 50, to move its antenna so as to receive transmissions from a satellite at the celestial coordinates of the Galaxy 1 satellite and instructs amplifier, 51, and receiver, 53, to amplify and tune as required to receive the transmission of the frequency of the transponder 23 of said satellite.
	Page 344, lines 24 - 32	... said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, each of thirty seconds

		duration. In succession, said station transmits units A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, and Z. Embedded in each of said program units are SPAM messages containing appropriate "program unit identification code" information and distance information.
	Page 342, line 4 - page 343, line 4	... said remote distribution station commences contacting, individually and in turn in a fashion well known in the art, the computers, 73, of each of said intermediate station, via telephone or other data transfer network, 98 (which has capacity to communicate information individually between said remote station and each of said computers, 73). Said remote station inputs schedule information to each computer, 73. Said information identifies the particular time and date when all of said intermediate transmission stations should commence receiving a particular satellite transmission--for example, at 4 A.M. eastern standard time, on January 28, 1988--and which particular satellite transponder transmission said stations should prepare to receive the programming on-- for example, transponder 23 on the Galaxy 1 satellite. Said schedule information also identifies to each specific computer, 73, which specific program units, transmitted via said transponder, said computer, 73, should cause the apparatus of its station to select and record, and when and on which channel of said station said computer, 73, should cause the apparatus of said station to transmit each of said program units to the field distribution system, 93, of said station. For example, in the case of the computer, 73, of the station of Fig. 6, said remote distribution station informs said computer, 73, to select and record program units Q, D, Y, and W; to transmit program unit Q at 2:30:30 PM eastern

		standard time, on January 29, 1988 on the cable channel transmitting the Cable News Network; to transmit program unit Y at 2:45:00 PM eastern standard time, on January 29, 1988 on the cable channel transmitting the Cable News Network; to transmit program unit W at 2:45:00 PM eastern standard time, on January 29, 1988 on the cable channel transmitting the USA Cable Network; to transmit program unit D at 9:15:30 PM eastern standard time, on January 30, 1988 on the cable channel transmitting the Cable News Network.
or more remote stations at said transmitter station	Page 352, line 31 - page 353, line 6	At 2:30:59 PM eastern standard time, on January 29, 1988 said program originating studio that originates said transmission of the Cable Channel Network embeds the aforementioned first-network-cue-to-transmit-network message (#8) in said transmission and transits said transmission to said CNN transponder. And automatically, said message is inputted, with source mark information, to the computer, 73, of the station of Fig. 6 (and to said Florida computer, 73). Receiving said first-network-cue-to-transmit-network message (#8) causes the computer, 73, of the station of Fig. 6, to cause the apparatus of said station, ...
	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.

and at least one is stored at said transmitter station which is operative to schedule transmission, said method further comprising the steps of	Page 342, lines 26 - 31	For example, in the case of the computer, 73, of the station of Fig. 6, said remote distribution station informs said computer, 73, to select and record program units Q, D, Y, and W; to transmit program unit Q at 2:30:30 PM eastern standard time, on January 29, 1988 on the cable channel transmitting the Cable News Network; ...
	Page 346, line 34 - page 347, line 5	Subsequently, receiving the select-Q-message (#8) causes said computer, 73, to determine that the "program unit identification code" information of unit Q matches preprogrammed schedule information which causes said computer, 73, to cause recorder, 76, to commence recording, thereby causing said recorder, 76, to record the programming of program unit Q which follows said select-Q-message (#8).
	Page 366, lines 19 - 20	Subsequently, at the scheduled time of the playing of Q, ...
adapting said transmitter station to store a schedule	Page 326, lines 25 - 26	Computer, 73, has capacity for maintaining records on the station's programming schedule ...
and causing said transmitter to transmit in accordance with said schedule.	Page 334, lines 7 - 23	Computer, 73, has capacity for automatically playing organized scheduled program units according to its recorded station schedule. Computer, 73, may be caused to commence playing any given unit of programming previously loaded at a recorder, 76 or 78, in any of a number of different fashions. For example, a remote program originating studio can embed and transmit a SPAM message that contains particular cueing information, and receiving said message can cause controller, 73, to cause a selected recorder, 76 or 78, to commence playing a tape that has been positioned at the tape head of said recorder, 76 or 78, according to the schedule of computer, 73. Or for

		example, the aforementioned clock of computer, 83, may be caused, in a predetermined fashion, to transmit time information periodically, and receiving particular time information can cause controller, 73, to cause a selected recorder, 76 or 78, to commence playing said tape.
	For example, page 366, lines 19 - 20	Subsequently, at the scheduled time of the playing of Q, ...
	For example, page 367, lines 2 - 9	... causes computer, 73, to cause recorder, 76, to commence playing and to cause matrix switch, 75, to configure its switches so as to cease transferring programming inputted from distribution amplifier, 63, to modulator, 83, then to commence transferring the output of recorder, 76, to modulator, 83, which causes the transmission of unit Q to field distribution system, 93.

104. The method of claim 103, further comprising the step of causing said transmitter station to generate, in accordance with said schedule,	Page 358, lines 26 - 29	At the aforementioned interval Q time prior to the scheduled playing of Q, particular preprogrammed preplay-and-generate instructions cause computer, 73, to commence said program instruction set generation.
	Page 355, lines 19 - 32	When the aforementioned remote distribution station inputs information to computer, 73, via network, 98, regarding unit Q, said distribution station inputs information that Q is particular combined medium programming and instructs computer, 73, to commence particular program instruction set generation in a particular fashion at a particular time interval prior to the scheduled playing of Q. (Hereinafter, a particular instance of such a time period is called "interval," as in "interval Q" of unit Q.) Inputting said

		information and instructions causes Computer, 73, to record said information and instructions in its record keeping fashion together with the scheduled generation time which computer, 73, calculates as the scheduled play time minus interval Q.
at least portions of	Page 358, line 29 - page 360, line 2	Said instructions cause computer, 73, ... to cause recorder, 76, to position the start of unit Q at its play head; to cause decoder, 77, to commence detecting signals on all video lines from the beginning of the normal transmission pattern to the end of the last detectable line of the full video frame; then to cause recorder, 76, to commence playing which causes recorder, 76, to transmit and decoder, 77, to detect a particular SPAM message. (Hereinafter, said message is called the "generate-set-information message (#9)".) Said message is addressed to ITS computers, 73, and contains a particular execution segment, appropriate meter-monitor information, padding bits as required, an information segment whose information is the intermediate generation set of Q, and an end of file signal. (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".) Detecting said message causes decoder, 77, to transmit said message to computer, 73, and receiving said message at computer, 73, causes particular SPAM decoder apparatus of computer, 73, (which apparatus is analogous to SPAM-controller, 205C, at microcomputer, 205, above and is not distinguished from computer, 73, hereinafter) to execute particular controlled functions. In the fashion of the first message of the "Wall

63

		Street Week" example at microcomputer, 205, computer, 73, is caused to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes computer, 73, ... to execute the information of said intermediate generation set as a compiled, machine language job.
	Page 363, line 34 - page 366, line 18	Executing the information of said intermediate generation set causes computer, 73, to generate said program instruction set in the following fashion. ... Automatically, computer, 73, selects and computes information of other variables and replaces other variable values of said generally applicable program instruction set information until a complete instance of higher language code of said program instruction set with all required formula-and-item-of-this-transmission information has been generated and exists at particular memory. Automatically, computer, 73, compiles the information of said instance and places the resulting so-called "object module" at particular memory (which compiling could be done, in the case of a program written in IBM BASIC, with the IBM BASIC compiler of the IBM Personal Computer Computer Language Series). Automatically, computer, 73, links the information of said object module with information of other compiled object modules that exist in memory at computer, 73, (and may have been transmitted to computer, 73, in the generally applicable program instruction set information if said intermediate generation set); generates a particular PROGRAM.EXE output file that is said program instruction set; and places said file at particular program-set-to-transmit memory of computer, 73, (which linking could be done, in the case of a program

		compiled by the IBM BASIC Compiler with the linker program of the IBM Disk Operating System of the IBM Personal Computer Computer Language Series). ... (Hereinafter, the program instruction set generated in example #9, under control of said intermediate generation set of Q, is called the "program instruction set of Q".) Executing the information of said intermediate generation set causes computer, 73, also to generate a particular associated data module. (Hereinafter, a data module that is transmitted to subscriber stations and processed by computers of said stations under control of instructions of a program instruction set is called a "data module set," and any given intermediate generation set may cause generation of information of a data module set or sets in addition to or rather than generating information of a program instruction set or sets.) In a fashion well known in the art, computer, 73, selects, from among the data in said local-formula-and-item information, information of ... Automatically, computer, 73, places said selected information (and any other information so selected) in a particular file called DATA_OF.ITS until the information of said file constitutes a complete instance of a particular data module set of Q. (Hereinafter, the data module set generated in example #9, under control of said intermediate generation set of Q, is called the "data module set of Q".)
signals to be transmitted.	Page 40, lines 17 - 25	The signals of the present invention are the modalities whereby stations that originate programming transmissions control the handling, generating, and displaying of programming at subscriber stations. (The term, "SPAM," is used, hereinafter, to refer to signal processing apparatus and methods of the present

		invention.) SPAM signals control and coordinate a wide variety of subscriber stations. Said stations include so-called "local
	Page 369, lines 24 - 31	... causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).")
	Page 371, lines 12 - 19	... causes computer, 73, to generate a second outbound SPAM message that includes information of said program instruction set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said second outbound SPAM message is called the "program-instruction-set message (#9).")

105.The method of claim 79, further comprising the steps of receiving at said transmitter station	Page 343, lines 26 - 32	Automatically, at the station of Fig. 6, the computer, 73, instructs a selected earth station, 50, to move its antenna so as to receive transmissions from a satellite at the celestial coordinates of the Galaxy 1 satellite and instructs amplifier, 51, and receiver, 53, to amplify and tune as required to receive the transmission of the frequency of the transponder 23 of said satellite.
an information transmission from a	Page 344, lines 24 - 32	... said remote distribution station commences transmitting programming by

remote station;		satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, each of thirty seconds duration. In succession, said station transmits units A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, and Z. Embedded in each of said program units are SPAM messages containing appropriate "program unit identification code" information and distance information.
	Please note page 347, lines 4 – 5.	... thereby causing said recorder, 76, to record the programming of program unit Q ...
detecting in the information transmission from said remote station an instruct signal;	Page 358, line 30 - page 359, line 13	... cause computer, 73, ... to cause recorder, 76, to position the start of unit Q at its play head; to cause decoder, 77, to commence detecting signals on all video lines from the beginning of the normal transmission pattern to the end of the last detectable line of the full video frame; then to cause recorder, 76, to commence playing which causes recorder, 76, to transmit and decoder, 77, to detect a particular SPAM message. (Hereinafter, said message is called the "generate-set-information message (#9)".) Said message is addressed to ITS computers, 73, and contains a particular execution segment, appropriate meter-monitor information, padding bits as required, an information segment whose information is the intermediate generation set of Q, and an end of file signal. (Hereinafter, the intermediate generation set that causes any given intermediate transmission station to generate a program instruction set of an instance of the transmission of the programming of program unit Q is called the "intermediate generation set of Q".)
executing said instruction set at a	Page 359, line 14 - page 360, line 2	Detecting said message causes decoder, 77, to transmit said message to

transmitter station computer in response to said instruct signal; and		computer, 73, and receiving said message at computer, 73, causes particular SPAM decoder apparatus of computer, 73, (which apparatus is analogous to SPAM-controller, 205C, at microcomputer, 205, above and is not distinguished from computer, 73, hereinafter) to execute particular controlled functions. In the fashion of the first message of the "Wall Street Week" example at microcomputer, 205, computer, 73, is caused to load information of said intermediate generation set at particular RAM. Then receiving the end of file signal that ends said message causes computer, 73, to execute particular additional instructions of said controlled functions. Executing said instructions, causes computer, 73, to cause recorder, 76, to cease playing and position the start of the unit Q conventional television programming at the play head of recorder, 76; to cause decoder, 77, to commence detecting information in the normal transmission location alone; to cause stripper, 81, and generator, 82, to prepare to commence stripping and embedding information, respectively, in the normal transmission location; and to execute the information of said intermediate generation set as a compiled, machine language job.
selecting, based on said instruction set, information to be	Page 365, line 22 - page 366, line 18	Executing the information of said intermediate generation set causes computer, 73, also to generate a particular associated data module. (Hereinafter, a data module that is transmitted to subscriber stations and processed by computers of said stations under control of instructions of a program instruction set is called a "data module set," and any given intermediate generation set may cause generation of information of a data module set or sets in addition to or rather than generating information of a program instruction set or sets.) In a fashion well

		known in the art, computer, 73, selects, from among the data in said local-formula-and-item information, information of the aforementioned "Nabisco Zweiback Teething Toast"; information of the street address of every one of said supermarket chain's markets in the local vicinity of the station of Fig. 6; particular cost-of-a-trimmed-pork-belly-unit information of 1987.25 that is the cost of all the trimmed cuts of meat of a pork belly unit; binary video image information of several telephone numbers, including a particular southwest delivery route telephone number, "456-1414", and a particular northwest delivery route telephone number, "224-3121"; and information of the particular local-automatic-order-taking telephone number of the supermarket chain applicable in the vicinity of the intermediate transmission station of Fig. 6 which is 1-(800) 247-8700. Automatically, computer, 73, places said selected information (and any other information so selected) in a particular file called DATA_OF.ITS until the information of said file constitutes a complete instance of a particular data module set of Q. (Hereinafter, the data module set generated in example #9, under control of said intermediate generation set of Q, is called the "data module set of Q".)
processed at a receiver station	Page 482, line 32 - page 483, line 9	Receiving the specific data-module-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the DATA_OF.ITS information in said message in a particular file, named "DATA_OF.ITS" at so-called "RAM disk" memory of the microcomputer, 205, of said station. At the station of Figs. 7 and 7F, receiving the data-module-set message (#10) transmitted by the intermediate transmission station of Fig. 6

		causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which includes complete information of the aforementioned data file, DATA_OF.ITS, of said station).
or communicating information to be	Page 369, line 24 - page 370, line 16	... causes computer, 73, to generate a particular first outbound SPAM message that includes information of the aforementioned data file, DATA_OF.ITS, whose information constitutes a complete instance of a data module set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said first outbound SPAM message is called the "data-module-set message (#9).") Automatically, computer, 73, ... selects and transmits to generator, 82, complete information of said data-module-set message (#9). In selecting and transmitting said complete information, computer, 73, automatically selects and transmits information of a "01" header; information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter-monitor information; any required padding bits (the requirement for and number which computer, 73, determines in a predetermined fashion); complete information of said data file, DATA_OF.ITS; and information of a SPAM end of file signal.
associated with said program.	On the one hand, page 370, line 33 - page 371, line 3	Receiving the information of said data-module-set message (#9) causes generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via generator, 82, to field distribution system, 93, thereby transmitting said data- module-set

		message (#9) to said system, 93.
	On the other hand, page 488, lines 21 – 27 and the remaining citations of this claim.	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 492, lines 23 - 30	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
	Please note page 478, lines 23 – 26.	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
	Please note page 509, lines 31 – 32.	In due course, said studio ceases transmitting programming of said program unit of Q ...

| 106. The method of claim 79, wherein a | Page 326, lines 19 - 20 | Cable program controller and computer, 73, is the central automatic |

controller		control unit for the transmission station.
at said transmitter station	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
controls a memory location	Page 367, lines 2 - 3	... causes computer, 73, to cause recorder, 76, ...
	Page 330, lines 6 - 7	... the magnetic tapes (or other recording media) loaded on the recorders, 76 and 78, ...
to communicate to said transmitter	Page 367, lines 2 - 9	... causes computer, 73, to cause recorder, 76, to commence playing and to cause matrix switch, 75, to configure its switches so as to cease transferring programming inputted from distribution amplifier, 63, to modulator, 83, then to commence transferring the output of recorder, 76, to modulator, 83, which causes the transmission of unit Q to field distribution system, 93.
a selected	Page 359, lines 27 - 30	... causes computer, 73, to cause recorder, 76, to cease playing and position the start of the unit Q conventional television programming at the play head of recorder, 76; ...
control signal, said method further comprising the steps of	Page 367, lines 30 - 33	Immediately after commencing to transmit said programming of Q, recorder, 76, plays and transmits three SPAM messages that are embedded in the

		prerecorded programming of Q.
	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
detecting a first instruct signal which is effective at the transmitter station to instruct transmission, and inputting said first instruct signal to said controller	Page 366, line 29 - page 367, line 9	Transmitting said message causes that decoder of signal processing system, 71, that receives the transmission of said distribution amplifier, 63, to detect said message and input said message, with appropriate source mark information, via code reader, 72, to computer, 73. Receiving said message and said mark information causes computer, 73, to so-called "cue" recorder, 76, and generator, 82, and to operate in its automatic playing fashion. Receiving said message and mark causes computer, 73, to cause recorder, 76, to commence playing and to cause matrix switch, 75, to configure its switches so as to cease transferring programming inputted from distribution amplifier, 63, to modulator, 83, then to commence transferring the output of recorder, 76, to modulator, 83, which causes the transmission of unit Q to field distribution system, 93.
thereby to cause said memory location to communicate	Page 367, lines 25 - 26	Causing recorder, 76, to play causes recorder, 76, to transmit ...
a selected	Page 359, lines 27 - 30	... causes computer, 73, to cause recorder, 76, to cease playing and position the start of the unit Q conventional television programming at the play head of recorder, 76; ...
control signal.	Page 367, lines 30 - 33	Immediately after commencing to transmit said programming of Q, recorder,

		76, plays and transmits three SPAM messages that are embedded in the prerecorded programming of Q.

108. The method of claim 106, further comprising the steps of storing said first instruct signal at said transmitter station,	Page 366, lines 29 - 32	Transmitting said message causes that decoder of signal processing system, 71, that receives the transmission of said distribution amplifier, 63, to detect said message and input said message, ...
	Page 325, line 34 - page 326, line 11. See Fig. 2D.	At signal processor system, 71, which is a system as shown in Fig. 2D, the outputted transmission of each distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70, is inputted into a dedicated decoder (such as decoders, 27, 28, and 29 in Fig. 2D) that processes continuously the inputted transmission of said distribution amplifier, 63, 64, 65, 66, 67, 68, 69, or 70; selects SPAM messages in said transmission that are addresses to ITS apparatus of said intermediate transmission station; ... and transfers said selected messages, with said source mark information, to code reader, 72.

	Page 34, line 18 - page 36, line 33. See Figs. 2, 2A, 2B, and 2C.	Signal decoder apparatus such as decoder, 203, in Fig. 1 and decoders, 30 and 40, in Fig. 2 are basic in the unified system of this invention.
		
		    Fig. 2A shows a TV signal decoder ...
		
		    Fig. 2B shows a radio signal decoder ... Fig. 2C shows a signal decoder that detects and processes signal information embedded in a frequency other than a television or radio frequency. ...
		    Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.

	For example, page	Fig. 3A shows one such preferred

	156, line 33 - page 157, line 2. See Fig. 3A.	controller, 39. One aspect of the preferred embodiment of controller, 39, is a series of buffers and processors at which forward error correction, protocol conversion, and the invoking of controlled functions take place in series.
and controlling said memory location to communicate	Page 367, lines 2 - 3	... causes computer, 73, to cause recorder, 76, to commence playing ...
	Page 367, lines 25 - 26	Causing recorder, 76, to play causes recorder, 76, to transmit programming of Q, ...
a selected	Page 359, lines 27 - 30	... causes computer, 73, to cause recorder, 76, to cease playing and position the start of the unit Q conventional television programming at the play head of recorder, 76; ...
control signal at a scheduled time	Page 366, lines 19 - 20	Subsequently, at the scheduled time of the playing of Q, ...
	Page 367, lines 30 - 33	Immediately after commencing to transmit said programming of Q, recorder, 76, plays and transmits three SPAM messages that are embedded in the prerecorded programming of Q.
according to said first instruct signal.	Page 366, line 29 - page 367, line 9	Transmitting said message causes that decoder of signal processing system, 71, that receives the transmission of said distribution amplifier, 63, to detect said message and input said message, with appropriate source mark information, via code reader, 72, to computer, 73. Receiving said message and said mark information causes computer, 73, to so-called "cue" recorder, 76, and generator, 82, and to operate in its automatic playing fashion. Receiving said message and mark causes computer, 73, to cause recorder, 76, to commence playing and to cause matrix switch, 75, to

		configure its switches so as to cease transferring programming inputted from distribution amplifier, 63, to modulator, 83, then to commence transferring the output of recorder, 76, to modulator, 83, which causes the transmission of unit Q to field distribution system, 93.

109. The method of claim 106, further comprising the step of controlling said memory location to communicate said program to said transmitter	Page 366, line 29 - page 367, line 9	Transmitting said message causes that decoder of signal processing system, 71, that receives the transmission of said distribution amplifier, 63, to detect said message and input said message, with appropriate source mark information, via code reader, 72, to computer, 73. Receiving said message and said mark information causes computer, 73, to so-called "cue" recorder, 76, and generator, 82, and to operate in its automatic playing fashion. Receiving said message and mark causes computer, 73, to cause recorder, 76, to commence playing and to cause matrix switch, 75, to configure its switches so as to cease transferring programming inputted from distribution amplifier, 63, to modulator, 83, then to commence transferring the output of recorder, 76, to modulator, 83, which causes the transmission of unit Q to field distribution system, 93.
based on a second instruct signal.	Page 346, line 34 - page 347, line 5	Subsequently, receiving the select-Q-message (#8) causes said computer, 73, to determine that the "program unit identification code" information of unit Q matches preprogrammed schedule information which causes said computer, 73, to cause recorder, 76, to commence recording, thereby causing said recorder, 76, to record the programming of program unit Q which follows said select-Q-message (#8).
	Page 59, lines 29 - 31	A SPAM message is the modality

		whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.

110.The method of claim 109, further comprising the steps of detecting a selected control signal communicated from said memory location	Page 369, lines 2 - 6 See "TV SIGNAL DECODER (FIG. 2A)" at "77" in Fig. 6A.	Causing recorder, 76, to play unit Q causes the decoder, 77, of the station of Fig. 6 then to detect a series of SPAM messages that are embedded in the programming of Q and are addressed to ITS computers, 73.
and programming a controller to respond to a control signal	Page 34, lines 21 – 26. See Fig. 2A.	Fig. 2A shows a TV signal decoder that detects signal information embedded in an inputted television frequency, renders said information into digital signals that subscriber station apparatus can process, identifies the particular apparatus to which said signals are addressed, and outputs said signals to said apparatus.
	Page 36, lines 32 - 33	Each decoder is controlled by a controller, 39, 44, or 47, that has buffer, microprocessor, ROM, and RAM capacities.
	Page 37, line 28 - page 38, line 8	Upon receiving any given instance of signal information, controller, 39, 44, or 47, is preprogrammed to process said information automatically. Controller, 39, is preprogrammed to discard received duplicate, incomplete, or irrelevant information; to correct errors in retained received information by means of forward error correction techniques well known in the art; to convert, as may be required, the corrected information, by means of input protocol techniques well known in the art, into digital information that subscriber station apparatus can receive and process; to modify selectively particular corrected and converted information in a

		predetermined fashion or fashions; to identify in a predetermined fashion or fashions subscriber station apparatus to which said signal information should be transferred; and to transfer said signals to said apparatus.
communicated from said memory location.	Page 369, lines 3 - 8	Causing recorder, 76, to play unit Q causes the decoder, 77, of the station of Fig. 6 then to detect a series of SPAM messages that are embedded in the programming of Q and are addressed to ITS computers, 73. Detecting said messages causes decoder, 77, to transfer said messages to computer, 73.

111.	This support is meant to be read with the support for the second embodiment of claim 106 which is found immediately after the support for this claim.	
The method of claim 106, further comprising the step of embedding first instruct signal in said program	Page 369, lines 3 - 6	Causing recorder, 76, to play unit Q causes the decoder, 77, of the station of Fig. 6 then to detect a series of SPAM messages that are embedded in the programming of Q and are addressed to ITS computers, 73.
thereby to enable said controller to respond to said embedded first instruct signal at a time when said program	Page 371, lines 4 - 19	In due course, decoder, 77, detects the second SPAM message in the aforementioned series of SPAM messages that are addressed to ITS computers, 73, and transfers said message to computer, 73. Said second message contains execution and meter- monitor segments (and is called, hereinafter, the "transmit-and-execute-program-instruction-set message (#9).") Receiving said transmit-and-execute-program- instruction-set message (#9) causes computer, 73, to generate a second

		outbound SPAM message that includes information of said program instruction set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said second outbound SPAM message is called the "program-instruction-set message (#9).")
is being communicated.	Page 367, lines 25 - 29	Causing recorder, 76, to play causes recorder, 76, to transmit programming of Q, ... and ... input the programming of Q to decoder, 77.
	Page 372, lines 20 - 21	Subsequently, as recorder, 76, plays and transmits the programming of Q, ...

106.	This is the second embodiment of this claim.	
The method of claim 79, wherein a controller	Page 326, lines 19 - 20	Cable program controller and computer, 73, is the central automatic control unit for the transmission station.
at said transmitter station	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
controls a memory location	Page 371, lines 11 - 19	Receiving said transmit-and-execute-program- instruction-set message (#9) causes computer, 73, to generate a second

		outbound SPAM message that includes information of said program instruction set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said second outbound SPAM message is called the "program-instruction-set message (#9).")
	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
	Page 327, lines 5 - 8	Computer, 73, ... may record ... in RAM or on an appropriate recording medium such as a magnetic disk at a disk drive.
	For example, page 371, lines 30 - 31	... the aforementioned program- set-to-transmit memory of computer, 73, ...
to communicate to said transmitter	Page 371, line 25 - page 372, line 6	Then, automatically, computer, 73, ... transmits to generator, 82, information of ... complete information of the aforementioned file that is at the aforementioned program- set-to-transmit memory of computer, 73, and that is said program instruction set of Q; Said ... transmitted information is complete information of said program-instruction-set message (#9). Receiving said information causes generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via generator, 82, to field distribution system, 93, thereby transmitting said program-instruction-set message (#9) to said system, 93.
a selected control signal, said method further comprising the steps of	Page 371, lines 25 - 35	Then, automatically, computer, 73, selects ... information of a "01" header; information of a particular SPAM execution segment that is addressed to

		URS microcomputers, 205; said retained meter-monitor information; any required padding bits; complete information of the aforementioned file that is at the aforementioned program- set-to-transmit memory of computer, 73, and that is said program instruction set of Q; and information of a SPAM end of file signal. Said selected ... information is complete information of said program-instruction-set message (#9).
	For example, page 485, lines 14 - 16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
detecting a first instruct signal which is effective at the transmitter station to instruct transmission, and inputting said first instruct signal to said controller	Page 371, lines 4 - 19	In due course, decoder, 77, detects the second SPAM message in the aforementioned series of SPAM messages that are addressed to ITS computers, 73, and transfers said message to computer, 73. Said second message contains execution and meter- monitor segments (and is called, hereinafter, the "transmit-and-execute-program-instruction-set message (#9).") Receiving said transmit-and-execute-program- instruction-set message (#9) causes computer, 73, to generate a second outbound SPAM message that includes information of said program instruction set of Q and to cause said message to be embedded in the transmission of the programming of Q and transmitted to field distribution system, 93, in the following fashion. (Hereinafter, said second outbound SPAM message is called the "program-instruction-set message (#9).") Automatically, computer, 73, selects the information
thereby to cause said memory location to	Page 371, lines 25 - 35	Then, automatically, computer, 73, selects ... information of a "01" header;

communicate a selected control signal.		information of a particular SPAM execution segment that is addressed to URS microcomputers, 205; said retained meter-monitor information; any required padding bits; complete information of the aforementioned file that is at the aforementioned program- set-to-transmit memory of computer, 73, and that is said program instruction set of Q; and information of a SPAM end of file signal. Said selected ... information is complete information of said program-instruction-set message (#9).

125. A transmitter station apparatus for processing a signal and communicating	Page 324, lines 8 - 11	The signal processing apparatus outlined in Figs. 2, 2A, 2B, 2C, and 2D, and their variants as appropriate, can be used to automate the operations of intermediate transmission stations that receive and retransmit programming.
mass medium	Page 1, lines 27 - 28	But television, radio, and broadcast print are only mass media.
program materials	Page 382, lines 15 - 16	Then said program originating studio starts to transmit the conventional television programming of unit Q.
	Page 374, lines 32 - 34	In example #10, a particular program originating studio transmits the commercial of program unit Q in a network transmission ...
	Page 387, lines 19 - 21	Subsequently, said program originating studio embeds in the normal transmission location of said network transmission and transmits a further series of messages ...
to present at	Page 20, lines 16 - 19	TV monitor, 202M, has capacity ... for presenting a conventional television video image and audio sound.

each of a plurality of receiver stations	Page 374, line 32 - page 375, line 2	In example #10, a particular program originating studio transmits the commercial of program unit Q in a network transmission and controls a plurality of intermediate transmission stations each of which controls, in turn, a plurality of subscriber stations that are ultimate receiver stations.
	For example, page 390, lines 30 - 31	Fig. 7 exemplifies one embodiment of an ultimate receiver station; ...
a combined output of	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 491, lines 17 - 23	(Simultaneously and in the same fashion, apparatus at the station of said second subscriber causes the specific video RAM image information of said station, which is "$1,080.64", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station and said subscriber can see the image said person pointing at $1,080.64.
a broadcast or cablecast	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television

		programming.
program	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
and a receiver specific computer generated datum,	Page 491, lines 13 - 14	... $1,071.32 is displayed ...
	Page 491, lines 21 - 23	... said subscriber can see ... $1,080.64.
with each of said receiver stations having an output device	Page 491, line 15	... monitor, 202M, ...
	Page 491, line 21	... monitor, 202M, ...
for receiving and delivering	Page 20, lines 16 - 19	TV monitor, 202M, has capacity for receiving composite video and audio transmissions and for presenting a conventional television video image and audio sound.
the broadcast or cablecast program	Page 490, lines 21 - 23	Said studio transmits television picture information of the right hand and arm of said person pointing moving to point at the upper left hand corner of the television screen.
and other information, each said station also having a microcomputer with a specific memory location operatively connected to said output device	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.
	Page 491, lines 17 - 23	(Simultaneously and in the same fashion, apparatus at the station of said second subscriber causes the specific video RAM

		image information of said station, which is "$1,080.64", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station and said subscriber can see the image said person pointing at $1,080.64.
for storing	Page 486, lines 20 - 27	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM that produce video image information in the upper left hand of a video screen when video RAM information is transmitted to said screen.
	Page 486, line 27 - page 487, line 8	(Simultaneously, ... the microcomputer, 205, at the station of said second subscriber ... causes binary image information of "$1,080.64" to be placed at particular upper left hand video screen bit locations of video RAM.
and outputting information to said output device, said transmitter station apparatus comprising:	Page 491, lines 10 - 23	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing. (Simultaneously and in the same fashion, apparatus at the station of said second subscriber causes the specific video RAM image information of said station, which is "$1,080.64", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station and said subscriber can see the image said person pointing at $1,080.64.
a broadcast or cablecast transmitter for communicating to	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of

		operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
	Page 375, lines 4 - 6	The station of Fig. 6 ... retransmits said transmission immediately via modulator, 83.
a plurality of receiver stations	Page 470, lines 9 - 12	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission ...
	Page 470, lines 27 - 31	(Simultaneously and in the same fashion, apparatus of the station of said second subscriber [which station is a subscriber station of the intermediate station of Fig. 6] receives, ... the information of said transmission.
an information transmission; a program input receiver operatively connected to said transmitter for communicating the program to said transmitter;	Page 375, lines 4 - 6	The station of Fig. 6 receives said network transmission at receiver, 53, and retransmits said transmission immediately via modulator, 83.
	Page 374, lines 32 - 34	In example #10, a particular program originating studio transmits the commercial of program unit Q in a network transmission ...
a memory	Page 382, lines 3 - 5	... program-set-to- transmit ... RAM memories of computer, 73,

or recorder	Page 378, lines 11 - 23	... causes each of said computers, 73, ... to record said information at particular memory.
operatively connected to said transmitter	Page 386, lines 7 - 14	Receiving the information of the particular program- instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-instruction-set message (#10) of said station to said system, 93.
for storing and communicating a first	Page 378, lines 22 - 25	... to record said information at particular memory. (Hereinafter, the program instruction set generated at the station of Fig. 6 in example #10 is called the "program instruction set of Q.1", ...
	Page 379, lines 21 - 28	... to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73. In so doing, said computer, 73, generates the specific program instruction set version--that is, the program instruction set of Q.1 ...
	Page 382, lines 1 - 5	... causes said computers, 73, each to load the information of said files, PROGRAM.EXE and DATA_OF.ITS, at particular program-set-to- transmit and data-set-to-transmit RAM memories of computer, 73, ...
	Page 385, lines 9 - 30	... causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-

		to-transmit RAM memory ... (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", ... Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, ... complete information of the program instruction set that is at its program-set-to transmit RAM memory; ...
	Page 385, line 35 - page 386, line 2	... the apparatus of the intermediate station of Fig. 6 ... transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station ...
control signal which at the receiver station operates to generate the receiver specific datum; and	Page 485, lines 14 - 16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	Page 486, lines 20 - 24	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
	Page 486, line 27 - page 487, line 8	(Simultaneously, under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, at the station of said second subscriber ... causes binary image information of "$1,080.64" to be placed at ... video RAM.
an input device operatively connected to said memory or recorder for	Page 377, lines 19 – 25. See Figs. 6A and 6B.	... those particular dedicated decoders of the signal processor systems, 71, of said stations that process continuously the inputted transmission of the distribution amplifiers, 63, to detect SPAM information embedded in the normal transmission location of said transmission and input said SPAM information to the computers, 73, of said stations.

causing said memory or recorder to communicate said first control signal	Page 385, lines 9 - 30	Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93. (Hereinafter, the second outbound SPAM message of any given one of said SPAM computers, 73, is called a "program- instruction-set message (#10)", ... Then, automatically, each of said computers, 73, selects and transmits to the generator, 82, of its station, ... complete information of the program instruction set that is at its program-set-to transmit RAM memory; ...
	Please note page 385, line 35 - page 386, line 2.	(Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station ...
at a specific time	Page 385, lines 3 - 9	Then said program originating studio embeds in the normal transmission location of said transmission and transmits a SPAM message that is addressed to ITS computers, 73, and that contains execution and meter-monitor segments. (Said message is called, hereinafter, the "transmit-and- execute-program-instruction-set message (#10)".) Receiving said message causes each of said computers, ...
to said transmitter,	Page 386, lines 7 - 14	Receiving the information of the particular program- instruction-set message (#10) of the computer, 73, of its station causes a generator, 82, to embed said information in the normal transmission location of the programming of Q transmission being transmitted via said generator, 82, to the field distribution system, 93, of said station, thereby transmitting the particular program-

		instruction-set message (#10) of said station to said system, 93.
thereby to communicate said program and said first control signal to	Page 11, lines 5 - 10	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer programming as well as combined medium programming.
	Page 478, lines 23 - 26	Then said studio ceases transmitting "Exotic Meals of India" programming for a so-called "commercial break" and commences transmitting the conventional television video and audio information of program unit Q.
	Page 469, line 35 - page 470, line 6	The program originating studio of a particular network transmits the programming transmission of a particular conventional television program on cooking techniques that is called "Exotic Meals of India." Said transmission is received at the intermediate transmission station of Fig. 6 and retransmitted immediately on the cable channel of modulator, 83.
	Page 483, line 35 - page 484, line 6	Then said studio transmits said transmit-and-execute- program-instruction-set message (#10), causing each intermediate transmission station, including the station of Fig. 6 ... to transmit its specific program-instruction-set message (#10), as described above.
said receiver stations	Page 470, lines 9 - 17	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program that is

		retransmitted by the intermediate station of Fig. 6; to interconnect in such a way that the audio information received at a tuner, 215, and the video information received at said tuner, 215, are inputted separately, via matrix switch, 258, ...
	Page 470, lines 27 - 32	(Simultaneously and in the same fashion, apparatus of the station of said second subscriber [which station is a subscriber station of the intermediate station of Fig. 6] receives, interconnects, ... the information of said transmission.
and cause each of said plurality of receiver stations to deliver said program at its output device,	Page 479, lines 14 - 18	... causes controller, 20, to combine microcomputer, 205, to the computer system of said program originating studio and to cause the video and audio output transmissions of microcomputer, 205, to be inputted to monitor, 202M.
	Page 480, lines 15 – 17. See Fig. 7E.	... causes matrix switch, 258, to interconnect the apparatus of said station in the fashion of Fig. 7E.
	Page 480, lines 19 - 25	... at the stations of said second subscriber ... interconnect at each of said stations in the fashion of Fig. 7E.)
generate a receiver station specific datum,	Page 485, lines 14 - 16	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay ...
	Page 486, lines 11 - 18	... said microcomputer, 205, ... computes the value of Y that is specific the the station of Figs. 7 and 7F to be: 1071.32 ...
	Page 486, line 27 - page 487, line 3	(Simultaneously, under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, at the station of said second subscriber ... computes the value of Y that is specific the station of said second subscriber to be 1080.64 (rounded); ...

91

place its receiver station specific datum at its memory location for a period of time,	Page 486, lines 20 - 24	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at bit locations of video RAM ...
	Page 487, lines 6 - 8	... causes binary image information of "$1,080.64" to be placed at ... video RAM.
	Page 491, lines 11 - 12	... its specific video RAM binary image information of "$1,071.32" ...
	Page 491, lines 18 - 19	... the specific video RAM image information of said station, which is "$1,080.64", ...
and deliver a combined output of said broadcast or cablecast program and its receiver station specific datum at its output device.	Page 491, lines 10 - 23	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing. (Simultaneously and in the same fashion, apparatus at the station of said second subscriber causes the specific video RAM image information of said station, which is "$1,080.64", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station and said subscriber can see the image said person pointing at $1,080.64.

127. A method of communicating	Page 11, lines 5 - 10	The present invention consists of an integrated system of methods and apparatus for communicating programming. The term "programming" refers to everything that is transmitted electronically to entertain, instruct or inform, including television, radio, broadcast print, and computer

		programming as well as combined medium programming.
mass medium	Page 1, lines 27 - 28	But television, radio, and broadcast print are only mass media.
program material to	Page 367, lines 8 - 11	... which causes the transmission of unit Q to field distribution system, 93. ... program unit Q is combined medium programming, ...
	Page 372, lines 20 - 23	Subsequently, as recorder, 76, plays and transmits the programming of Q, via modulator, 83, to field distribution system, 93, recorder, 76, transmits eight SPAM messages that are embedded in the prerecorded programming of Q.
a plurality of receiver stations each of which includes a broadcast or cablecast program receiver,	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
	Page 470, lines 9 - 12	At the station of Fig. 7 and 7F (which station is a subscriber station of the intermediate station of Fig. 6), in the fashions described above, apparatus is caused to receive the particular transmission of said program ...
	For example, page 390, lines 30 - 31	Fig. 7 exemplifies one embodiment of an ultimate receiver station; ...
	Page 470, lines 27 – 31 (emphasis added)	(Simultaneously and *in the same fashion, apparatus* of the station of said

		second subscriber [which station is a subscriber station of the intermediate station of Fig. 6] receives, interconnects, meters and monitors, and displays at a monitor, 202M, the information of said transmission.
an output device,	Page 490, line 35 - page 491, line 6	Receiving said message causes each subscriber station that has completed the generation of first overlay image information at video RAM to combine its specific image information with the conventional video information transmitted by said studio and cause its specific monitor, 202M, to display the combined specific image information and transmitted video information.
a control signal	Page 59, lines 29 - 31	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations.
detector,	Page 491, lines 6 - 7	At the station of Fig. 7 and 7F, decoder, 203, detects the information of said message, ...
	Page 491, lines 17 – 18 (emphasis added)	(Simultaneously and *in the same fashion, apparatus* at the station of said second subscriber causes ...
a computer with a specific memory location capable of communicating to said output device,	Page 491, lines 10 - 23	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at ... monitor, 202M, ... (Simultaneously and in the same fashion, apparatus at the station of said second subscriber causes the specific video RAM image information of said station, which is "$1,080.64", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station ...

and with each said receiver station adapted to detect the presence of at least one control signal,	Page 480, line 28 - page 481, line 12	... said studio transmits said synch-SPAM-reception message (#10), ... Receiving said message at the station of Figs. 7 and 7F causes decoder, 203, to detect the end of file signal of said message and ... to commence identifying and processing the individual SPAM messages of the SPAM information subsequently embedded in the transmission of the programming of Q.
	Page 482, lines 9 – 13 (emphasis added)	(Receiving said synch-SPAM-reception message (#10) and said control-invoking message (#10) at the stations of said second subscriber ... causes *apparatus at said stations, in the same fashion,* to come under control of the computer system of said program
	Page 59, lines 29 - 33	A SPAM message is the modality whereby the original transmission station that originates said message controls specific addressed apparatus at subscriber stations. The information of any given SPAM transmission consists of a series or stream of sequentially transmitted SPAM messages.
to generate a receiver specific datum	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 486, lines 20 - 24	... microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at ... video RAM ...
	Page 486, line 27 - page 487, line 8	(Simultaneously, under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, at the station of said second subscriber ... causes binary image information of "$1,080.64" to be placed at ... video RAM.

	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
	Page 488, line 27 - page 489, line 13	(In similar fashion, the microcomputer, 205, at the station of said second subscriber ... selects the aforementioned audio information of an announcer's voice saying "forty-five" from its file, D:DATA_OF.ITS; and places said information at said audio RAM.
in response to a detected specific control signal,	Page 484, lines 7 - 18	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
and to deliver at said output device combined medium programming including	Page 491, lines 10 - 16	Automatically, microcomputer, 205, combines its specific video RAM binary image information of "$1,071.32" with its received conventional video information. And automatically $1,071.32 is displayed at the upper left hand corner of the picture screen of monitor, 202M, which is the corner to which the image of the person shown at said screen is pointing.

	Page 491, lines 17 - 23	(Simultaneously and in the same fashion, apparatus at the station of said second subscriber causes the specific video RAM image information of said station, which is "$1,080.64", to be displayed at the upper left hand corner of the picture screen of the monitor, 202M, of said station and said subscriber can see the image said person pointing at $1,080.64.
	Page 491, lines 30 - 35	Said studio then transmits audio information of the announcer saying: "Super Discount Supermarkets makes this offer--today only--at cost, and this offer represents a saving to you of over."
	Page 492, line 23 - page 493, line 5	Automatically, microcomputer, 205, transmits to monitor, 202M, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing the emission of sound of said audio information, and the subscriber of said station can hear said announcer's voice saying: "forty-six". (Simultaneously, the microcomputer, 205, at the station of said second subscriber transmits to the monitor, 202M, of said station, via audio information transmission means, one instance of the information at the audio RAM of said microcomputer, 205, causing emission of sound of said audio information, and said second subscriber can hear said announcer's voice saying: "forty-five".
	Page 493, lines 16 - 21	Then after an interval that is long enough for each subscriber station to emit sound of its specific audio RAM information, said studio transmits audio information of the announcer saying: "percent."
said receiver specific	Page 491, lines 13 -	... automatically $1,071.32 is displayed

datum within	14	...
	Page 491, lines 21 - 23	... and said subscriber can see the image said person pointing at $1,080.64.
	Page 492, lines 27 - 30	... and the subscriber of said station can hear said announcer's voice saying: "forty-six".
	Page 493, lines 2 - 5	... and said second subscriber can hear said announcer's voice saying: "forty-five".
a broadcast or cablecast	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
program, said method comprising the steps of:	Page 478, lines 23 - 26	Then said studio ... commences transmitting the conventional television video and audio information of program unit Q.
receiving at	Page 343, lines 26 - 32	Automatically, at the station of Fig. 6, the computer, 73, instructs ... receiver, 53, ... to receive the transmission of the frequency of the transponder 23 of said satellite.
a transmitter station	Page 324, lines 11 - 21	The stations so automated may transmit any form of electronically transmitted programming, including television, radio, print, data, and combined medium programming and may range in scale of operation from wireless broadcast stations

		that transmit a single programming transmission to cable systems that cablecast many channels simultaneously. Fig. 6 illustrates Signal Processing Apparatus and Methods at an intermediate transmission station that is a cable television system "head end" and that cablecasts several channels of television programming.
a program	Page 344, lines 23 – 30 (emphasis added)	... said remote distribution station commences transmitting programming by satellite up-link means, well known in the art. Said programming consists of a sequence of the program units of 26 spot commercials, each of thirty seconds duration. In succession, said station transmits units A, B, C, ... P, Q, R, ...
	Please note page 347, lines 4 – 5.	... causing said recorder, 76, to record the programming of program unit Q ...
to be transmitted;	Page 342, lines 26 - 31	For example, in the case of the computer, 73, of the station of Fig. 6, said remote distribution station informs said computer, 73, to select and record program units Q, D, Y, and W; to transmit program unit Q at 2:30:30 PM eastern standard time, on January 29, 1988 on the cable channel transmitting the Cable News Network; ...
generating data related to said program;	Page 379, lines 5 - 26	At the station of Fig. 6, for example, executing the information of said intermediate generation set causes the computer, 73, in precisely the fashion that applied in example #9, to compute the value of a particular variable b to be 62.21875; to computes the value of a particular variable c to be 2.117; and to replaces particular variable values, a, b, and c, in a particular so-called "higher language line of program code" to become formula-and-item-of- this-transmission information of: $Y = 1000.00 + 62.21875 + (2.117$

		* X) to select, compute, and replace other variable information until complete program instruction set information exists in higher language code at particular memory; to compile said higher language information; to link the information so complied with other compiled information; and to record the information so computed, compiled, and linked (which is complete information the program instruction set of Q of the station of Fig. 6) in a file named "PROGRAM.EXE", in a fashion well known in the art, on a computer memory disk of computer, 73.
generating at said transmitter station a first control signal using said generated data	Page 385, lines 9-13	Receiving said message causes each of said computers, 73, to generate a second outbound SPAM message that includes information of the program instruction set at its program- set-to-transmit RAM memory and to cause said message to be transmitted to its field distribution system, 93.
	Page 385, line 35 - page 386, line 3	Receiving said message causes the apparatus of the intermediate station of Fig. 6 to transmit the program instruction set of Q.1 in the program-instruction-set message (#10) of said station
which at the receiver station operates to generate the receiver specific datum;	Page 484, lines 7 - 18	Receiving the specific program-instruction-set message (#10) of its intermediate transmission station causes each ultimate receiver station to record one instance of the PROGRAM.EXE information in said message at particular RAM and execute the information so loaded as a machine language job. At the station of Figs. 7 and 7F, receiving the program- instruction-set message (#10) transmitted by the intermediate transmission station of Fig. 6 causes said message to be detected at decoder, 203, and causes decoder, 203, to load and

		execute at microcomputer, 205, the information segment of said message (which is the program instruction set of Q.1 and is the output file, PROGRAM.EXE, of said station).
	Page 485, lines 14 - 18	Under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, of Figs. 7 and 7F generates image information of a first video overlay and generates selected information of subsequent overlays in the following fashion.
	Page 486, lines 20 - 24	Automatically, microcomputer, 205, ... causes binary image information of "$1,071.32" to be placed at ... video RAM ...
	Page 486, line 27 - page 487, line 8	(Simultaneously, under control of the instructions of said program instruction set of Q.1, the microcomputer, 205, at the station of said second subscriber ... causes binary image information of "$1,080.64" to be placed at ... video RAM.
	Page 488, lines 21 - 27	... microcomputer, 205, ... selects the audio information of an announcer's voice saying "forty-six" from among the information of said file, D:DATA_OF.ITS; and places said information at audio RAM.
	Page 488, line 27 - page 489, line 13	(In similar fashion, the microcomputer, 205, at the station of said second subscriber ... selects the aforementioned audio information of an announcer's voice saying "forty-five" from its file, D:DATA_OF.ITS; and places said information at said audio RAM.
receiving a second control signal	Page 367, line 2 - 7	Receiving said message causes computer, 73, to cause recorder, 76, to commence playing and to cause matrix switch, 75, to configure its switches so as ... to commence transferring the output of

		recorder, 76, to modulator, 83, ...
transmitting at least one of said program and said first control signal in response to said second control signal.	Page 367, lines 8 - 9	... which causes the transmission of unit Q to field distribution system, 93.
	Page 372, lines 2 - 6	... in ... the programming of Q transmission being transmitted via generator, 82, to field distribution system, 93, thereby transmitting said program-instruction-set message (#9) to said system, 93.

128.The method of claim 127, said method further comprising the step of transmitting said second control signal to said transmitter station.	Page 366, lines 22 - 33	At said time, at the particular program originating studio that originates said network transmission, a particular SPAM message that contains execution and meter-monitor segments and that is addressed to ITS computers, 73, is embedded in said network transmission and transmitted. (Hereinafter, said message is called the "first cueing message (#9).") Transmitting said message causes that decoder of signal processing system, 71, that receives the transmission of said distribution amplifier, 63, to detect said message and input said message, with appropriate source mark information, via code reader, 72, to computer, 73.